Attorney's Docket No.: 17979-046US1 Client's Ref. No.: 05028 P WO US

1

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled METHODS FOR MANUFACTURING REFLECTIVE OPTICAL ELEMENTS, REFLECTIVE OPTICAL ELEMENTS, EUV-LITHOGRAPHY APPARATUSES AND METHODS FOR OPERATING OPTICAL ELEMENTS AND EUV-LITHOGRAPHY APPARATUSES, METHODS FOR DETERMINING THE PHASE SHIFT, METHODS FOR DETERMINING THE LAYER THICKNESS, AND APPARATUSES FOR CARRYING OUT THE METHODS, the specification of which:

ed below a ted States nowledge t ederal Re	application in the mannithe duty to disclose all ignitations, §1.56(a) which international filing duty. U.S. Serial No.	er provided b information I ch became av	by the first paragraph know to be material ailable between the	of Title 35, Un to patentability	as defined in a prior applicate	de, §112, I Title 37, Co
ed below a ted States nowledge t ederal Re	nd, insofar as the subject application in the mann the duty to disclose all ignitations, §1.56(a) which	er provided b information I ch became av	by the first paragraph know to be material ailable between the	of Title 35, Un to patentability	inted States Co as defined in	de, §112, I Title 37, Co
ed below a ted States nowledge t ederal Re	nd, insofar as the subject application in the mann the duty to disclose all ignitations, §1.56(a) which	er provided b information I ch became av	by the first paragraph know to be material ailable between the	of Title 35, Un to patentability	inted States Co as defined in	de, §112, I Title 37, Co
d below a ted States towledge t	nd, insofar as the subject application in the mann the duty to disclose all i	er provided b information I	by the first paragraph know to be material	of Title 35, Un to patentability	inted States Co as defined in	de, §112, I Title 37, Co
d below as	nd, insofar as the subject application in the mann	er provided b	by the first paragraph	of Title 35, Ur	inted States Co	de, §112, I
		of Hammer or o	acti of file claims of	mm -pp		d in the price
I hen						
	eby claim the benefit un	der Title 35.	United States Code.	§120 of any U	ated States ap	plication(s)
60550),3 02	03/05/	2004	Expire	d	
	U.S. Serial No.		Filing Date		Status	
cation(s)	listed below:					
	eby claim the benefit un	Wer The 33,	Officer States Code,	\$113(e)(1) of a	iny Cilica Stat	es provisio
T 1		Jan Tisla 25	Vimitad States Code	\$110/aV1) of a	www.United Stat	tes provisio
	of Federal Regulations					
I ack	nowledge the duty to di	sclose all info	ormation I know to b	e material to pa	nentability in a	ccordance
ding the	claims, as amended by a	my amendme	nt referred to above	•		
	eby state that I have rev				dentified speci	ification,
0			d under PCT Article			
'n	was described and claim		International Applica	ition No		filed on
	was filed on August		as Application S	erial NoI	<u>W398,481</u>	and wa
[X]	— • • • •		A 1° . ° C	*.137. 1	0/500 401	d

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Country	Application No.	Filing Date	Priority Claimed
Germany	10 2004 011 355.6	03/05/2004	[X] Yes [] No [X] Yes [] No
Germany	10 2004 011 356.4	03/05/2004	

Attorney's Docket No.: 17979-046US1 Client Ref.: 05028 P WO US

I hereby appoint the following attorneys and or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Sean P. Daley, Reg. No. 40,978

17979-046US1

Chris C. Bowley, Reg. No. 55,016

Marc M. Wefers, Ph.D., J.D., Reg. No. 56,842

Direct all telephone calls to SEAN P. DALEY at telephone number (617) 542-5070.

Direct all correspondence to the following:

26161 PTO Customer Number

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor:	MARCO WEDOWSKI - Deceased NADYEH SHARILOO - Executor				
Executor's Signature Residence Address: Citizenship: Post Office Address:	Nacly Slands Aalen Germany Otto-Schott-Strasse 15 73431 Aalen Germany	_ Date:	Jun	. 12.	20
Full Name of Inventor:	FRANK SCHOLZE				
Inventor's Signature:		Date:			
Residence Address:	Berlin		· · · · · · · · · · · · · · · · · · ·		
Citizenship:	Germany				
Post Office Address:	Rapunzelstrasse 41				
	12524 Berlin				
	Germany				
Full Name of Inventor:	JOHANNES TUEMMLER		·		
Inventor's Signature:		Date:		<u> </u>	
Residence Address:	Berlin				
Citizenship:	Germany				
Post Office Address:	Semmelweisstrasse 15a				
	12524 Berlin				
	Germany				
21636755.doc					
05028 P WO US					

Attorney's Docket No.: 17979-046US1 Client's Ref. No.: 05028 P WO US

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled METHODS FOR MANUFACTURING REFLECTIVE OPTICAL ELEMENTS, REFLECTIVE OPTICAL ELEMENTS, EUV-LITHOGRAPHY APPARATUSES AND METHODS FOR OPERATING OPTICAL ELEMENTS AND EUV-LITHOGRAPHY APPARATUSES, METHODS FOR DETERMINING THE PHASE SHIFT, METHODS FOR DETERMINING THE LAYER THICKNESS, AND APPARATUSES FOR CARRYING OUT THE METHODS, the specification of which:

PPARATUSES F	<u>UR CAR</u>							
[] is att	ached her	eto.	2006	as Application Sari	ial No	10/598 48	81 a	nd was
				as Application Seri	lai 140	10/370510		
	ided on _	and plaimed i	DCT I	nternational Application	on No		filed	on
[] was	described	and claimed	omanda.	l under PCT Article 19	9 on			
		and as	amended	i under i et zamete i z	, on			
I hereby so	tate that I s, as ame	have reviewe nded by any a	d and un mendme	derstand the contents on treferred to above.	of the abov	e-identified	d specificati	on,
I acknowl litle 37, Code of F	edge the ederal Re	duty to disclosegulations, §1.	se all info	ormation I know to be	material to	patentabil	ity in accord	lance with
I hereby on pplication(s) lister		oenefit under '	Title 35,	United States Code, §	119(e)(1) (of any Unite	ed States pro	ovisional
TT S	. Serial I	۸a		Filing Date		Sta	tus	
U.C	. Sel ial i	10.						
I hereby of sted below and, if the states appleads the converge the converge to the convergence to the conv	claim the nsofar as ication in	benefit under the subject matching the manner processes all informations.	atter of e rovided l rmation I	2004 United States Code, § ach of the claims of the by the first paragraph of know to be material to	120 of any ais applicat of Title 35, o patentab	ion is not d United Sta ility as defin	isclosed in the ites Code, § ned in Title	112, I 37, Code
I hereby of the steed below and, in the states applications of Federal Regular	claim the nsofar as ication in distinctions, §1.	benefit under the subject mathemather the	Title 35, atter of e rovided land in the second at the sec	United States Code, § ach of the claims of the by the first paragraph of know to be material to ailable between the fill plication:	120 of any ais applicat of Title 35, o patentab	United Station is not did United Station is not did United Station is defined the prior a	ites Code, § ned in Title application a	112, I 37, Code
I hereby of isted below and, in Justed States application of Federal Regular national or PCT in	claim the nsofar as ication in distinctions, §1.	benefit under the subject mathemathemathemathemathemathemathemathe	Title 35, atter of e rovided lamation I ecame avoit this ap	United States Code, § ach of the claims of the by the first paragraph of know to be material trailable between the filling Date	120 of any ais applicat of Title 35, to patentable ling date of	United Station is not done is not done is not done is not done it is used to the prior a state of the prior a stat	isclosed in the ites Code, § ned in Title	112, I 37, Code
I hereby of isted below and, is United States applace acknowledge the of Federal Regular national or PCT in	claim the nsofar as ication in distinctions, §1.: ternation	benefit under the subject mathemathemathemathemathemathemathemathe	Title 35, atter of e rovided land in the second at the sec	United States Code, § ach of the claims of the by the first paragraph of know to be material trailable between the filling Date	120 of any ais applicat of Title 35, to patentable ling date of	United Station is not did United Station is not did United Station is defined the prior a	ites Code, § ned in Title application a	112, I 37, Code
I hereby of isted below and, is United States appliance of Federal Regular national or PCT in PCT/EP20 I hereby application(s) for country other than for patent or investigation.	claim the nsofar as ication in luty to distions, §1.5 ternation S. Serial 105/05098 claim for patent or the Unit ntor's ceriof Americal	benefit under the subject mather the manner processes all informations of the manner processes all informations of the manner processes all informations of the manner of	Title 35, atter of erovided la mation I ecame avoid this apon of this apon of the second of the seco	United States Code, § ach of the claims of the by the first paragraph of know to be material trailable between the filling Date	120 of any is applicat of Title 35, to patentable ling date of Pensisten Codional application identification id	United Station is not done is not done is not done it in the prior and the prior and ing at least ting at least	ates Code, § ned in Title application a signating at one country	least one application other than
I hereby of isted below and, is United States application (s) for country other than for patent or invented States application(s) of vertex application (s) of vertex applicat	claim the nsofar as ication in luty to distions, §1.5 ternation S. Serial 105/05098 claim for patent or the Unit ntor's ceriof Americal	benefit under the subject mather manner processes all informations of the second secon	Title 35, atter of erovided la rovided la rovided la rovided la rovided la rovided la rovide and a rovide la rovide	United States Code, § ach of the claims of the py the first paragraph of know to be material trailable between the fill plication: Filing Date 2005 Inder Title 35, United States of any PCT international states are remarked below and have a sernational application (ame subject matter has	States Codional applicational applicational applicational applicational applicational affiliational	United Station is not done is not done is not done it in the prior and the prior and ing at least ting at least	ates Code, § ned in Title application a signating at any foreign a one country re that of the	least one application other than
I hereby of isted below and, is United States applicational or PCT in PCT/EP20 I hereby application(s) for country other than for patent or invented States application(s) of value Country Country Country	claim the nsofar as ication in luty to distions, §1.5 ternation S. Serial 105/05098 claim for patent or the Unit ntor's ceriof Americal	benefit under the subject mather the manner processes all informations of the second o	Title 35, atter of erovided land in this aportion of this aportificate of the second in the second i	United States Code, § ach of the claims of the py the first paragraph of know to be material trailable between the fill plication: Filing Date 2005 Inder Title 35, United States of any PCT international states are remarked below and have a ternational application (ame subject matter have	120 of any is applicat of Title 35, to patentable ling date of Pensisten Codional application identification id	United Station is not done is not done is not done it in the prior and the prior and ing at least ting at least	ates Code, § ned in Title application a signating at any foreign a one country re that of the	least one application other than
I hereby of isted below and, is United States application (s) for country other than for patent or invented States application(s) of vertex application (s) of vertex applicat	claim the nsofar as ication in luty to distions, §1.5 ternation S. Serial 105/05098 claim for patent or the Unit ntor's ceriof Americal	benefit under the subject mather manner processes all informations of the second secon	Title 35, atter of erovided la mation I ecame avoided la control of this aportificate of the second in the second	United States Code, § ach of the claims of the py the first paragraph of know to be material trailable between the fill plication: Filing Date 2005 Inder Title 35, United States of any PCT international states are remarked below and have a sernational application (ame subject matter has	States Codional applicational applicational applicational applicational applicational affiliational	United Station is not done is not done is not done it in the prior and the prior and ing at least ting at least	ates Code, § ned in Title application a signating at any foreign a one country re that of the Priority	least one application other than

Attorney's Docket No.: 17979-046US1 Client Ref.: 05028 P WO US

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Sean P. Daley, Reg. No. 40,978

05028 P WO US

17979-046US1

Chris C. Bowley, Reg. No. 55,016

Marc M. Wefers, Ph.D., J.D., Reg. No. 56,842

Direct all telephone calls to SEAN P. DALEY at telephone number (617) 542-5070.

Direct all correspondence to the following:

26161 PTO Customer Number

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor:	MARCO WEDOWSKI	
Inventor's Signature:		Date:
Residence Address:	Aalen	
Citizenship:	Germany	
1	-deceased-	
Post Office Address:	Otto-Schott-Strasse 15	
	73431 Aalen	
	Germany	
Full Name of Inventor:	FRANK SCHOLZE	
	A	
Inventor's Signature:	HI lelela	Date: Jem. 05, 2007
Residence Address:	Berlin	
Citizenship:	Germany	
Post Office Address:	Rapunzelstrasse 41	•
Fost Office Address.	12524 Berlin	
	Germany	
Full Name of Inventor:	JOHANNES TUEMMLER	-
Inventor's Signature:		Date:
Residence Address:	Berlin	
Citizenship:	Germany	
Post Office Address:	Semmelweisstrasse 15a	
	12524 Berlin	
	Germany	
21636755.doc		

Attorney's Docket No.: 17979-046US1 Client's Ref. No.: 05028 P WO US

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled METHODS FOR MANUFACTURING REFLECTIVE OPTICAL ELEMENTS, REFLECTIVE OPTICAL ELEMENTS, EUV-LITHOGRAPHY APPARATUSES AND METHODS FOR OPERATING OPTICAL ELEMENTS AND EUV-LITHOGRAPHY APPARATUSES, METHODS FOR DETERMINING THE PHASE SHIFT, METHODS FOR DETERMINING THE LAYER THICKNESS, AND APPARATUSES FOR CARRYING OUT THE METHODS, the specification of which:

			DDS, the specification of	
[] [X]	is attached hereto. was filed onAug amended on		Application Serial No	10/598,481 and was
D	was described and o	laimed in PCT Interna	ational Application Noer PCT Article 19 on	filed on
I her including the	eby state that I have claims, as amended	reviewed and understa by any amendment ref	and the contents of the aberred to above.	ove-identified specification,
	knowledge the duty to e of Federal Regulati		ion I know to be material	to patentability in accordance with
	eby claim the benefi listed below:	t under Title 35, Unite	d States Code, §119(e)(1)) of any United States provisional
	U.S. Serial No.	Fili	ng Date	Status
6055	0,302	03/05/2004	E	xpired
United States	s application in the in	anner provided by the	first paragraph of little 3	ation is not disclosed in the prior 5, United States Code, §112, I bility as defined in Title 37, Code
acknowledge of Federal Re	the duty to disclose egulations, §1.56(a)	all information I know which became availabling date of this applicat	first paragraph of Title 3 to be material to patental e between the filing date ion:	bility as defined in Title 37, Code of the prior application and the
acknowledge of Federal Ro national or P	the duty to disclose egulations, §1.56(a) of CT international filing. U.S. Serial No.	all information I know which became availabling date of this applicat	first paragraph of Title 3 to be material to patental e between the filing date ion:	bility as defined in Title 37, Code of the prior application and the Status
acknowledge of Federal Re national or P	the duty to disclose egulations, §1.56(a) of CT international filing. U.S. Serial No. /EP2005/050985	all information I know which became available date of this applicat Fill 03/05/2005	first paragraph of Title 3 to be material to patental e between the filing date ion: ing Date Perfect Citle 35, United States Co.	Status Status ending ode, §119 of any foreign
acknowledge of Federal Renational or P PCT I he application(s country other for patent or the United S	e the duty to disclose egulations, §1.56(a) of CT international filing. U.S. Serial No. PEP2005/050985 Ereby claim foreign particles of inventor of inventor of the United Station of the Control of the Control of the United Station of the U	all information I know which became available glate of this applicated applicated by the same of the s	first paragraph of Title 3 to be material to patental e between the filing date ion: Ing Date Portion PCT international appoint application(s) design	bility as defined in Title 37, Code of the prior application and the Status ending
I he application(s country othe for patent or the United S application(s)	ethe duty to disclose egulations, §1.56(a) of the control of the c	all information I know which became available g date of this applicated applicated by the same of the	first paragraph of Title 3 to be material to patental e between the filing date ion: Ing Date Performance Title 35, United States Composition application (s) design ubject matter having a file.	Status Status Status And the prior application and the status Status And the status And
acknowledge of Federal Renational or P PCT: I he application(secountry other for patent or the United Seapplication(seapplicat	ethe duty to disclose egulations, §1.56(a) of the control of the c	all information I know which became available ag date of this applicated and the cor's certificate or of a tes of America listed to or any PCT internation by me on the same sectaimed: Application No.	first paragraph of Title 3 to be material to patental e between the filing date ion: Ing Date Portion PCT international appoint application(s) design	Status Status Status And the prior application and the status Status And the status And
I he application(s country othe for patent or the United S application(s)	the duty to disclose egulations, §1.56(a) of the control of the co	all information I know which became available g date of this applicated applicated by the same of the	first paragraph of Title 3 to be material to patental e between the filing date ion: Ing Date Perfect Title 35, United States Comp PCT international appointment appointment appointment application(s) designable to matter having a file. Filing Date	Status Status ending ode, §119 of any foreign lication(s) designating at least one aified below any foreign application and the ling at least one that of the ling date before that of the ling date before that of the ling date before that of the line at least one country other than ling date before that of the line line line line line line line lin

Attorney's Docket No.: 17979-046US1 Client Ref.: 05028 P WO US

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Sean P. Daley, Reg. No. 40,978

05028 P WO US 17979-046US1 Chris C. Bowley, Reg. No. 55,016

Marc M. Wefers, Ph.D., J.D., Reg. No. 56,842

Direct all telephone calls to SEAN P. DALEY at telephone number (617) 542-5070.

Direct all correspondence to the following:

26161 PTO Customer Number

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor:	MARCO WEDOWSKI		
Inventor's Signature: Residence Address:	Aalen	_ Date:	•
Citizenship:	Germany -deceased-		
Post Office Address:	Otto-Schott-Strasse 15 73431 Aalen Germany		
Full Name of Inventor:	FRANK SCHOLZE		
Inventor's Signature:		Date:	
Residence Address:	Berlin	_	
Citizenship:	Germany		
Post Office Address:	Rapunzelstrasse 41 12524 Berlin		
	Germany		
Full Name of Inventor:	JOHANNES TUEMMLER		
Inventor's Signature:	7 lames T-l 5	Data	Han 11 2001
Residence Address:	Berlin	- Date:	May 31, 2004
Citizenship:	Germany		V
Post Office Address:	Semmelweisstrasse 15a		
	12524 Berlin		
	Germany		
21636755.doc			